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MUELLER AND SMITH, LPA			LEVY, NEIL S	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/698,722

Filing Date: October 31, 2003

Appellant(s): VORIS ET AL.

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JERRY MUELLER, Jr.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/23/09 appealing from the Office action mailed 1/30/09

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

.The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,747,519	KODAMA	5-1998
5,801,194	VORIS	9-1998
4,849,006	KNUDSON	7-1989
5,730,996	BEALL	3-1998

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-20,23- 26,29-35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over KODAMA et al 5747579 and VAN VORIS et al 5801194 in view of KNUDSON 4849006 & further in view of Beall et al 5730996.

The instant claim 1 is a method of applying a pest barrier to a structure. He barrier is a pesticide on a colloidal clay, dispersed in a polymer, the polymer/clay /pesticide applied to the structure.

The structure includes wood, as of dependent claims 20 & 25 (wood , plywood & particle board).

The pests include termites, as of dependent claims 23 & 24.

The pesticides include the pyrethroids, bifenthrin, cyfluthrin, permethrin, as of dependent claim 19.

The clays include bentonite, the smectite clays of dependent claims 31 & 32.

Kodama also applies termite barrier compositions to prevent termite passage (column 1, lines 45-47) directly to structures-houses (column 1, lines 37-43, col. 3, lines 27-36) plywood & particle board. The compositions are applied by spraying or impregnating wood (col. 3, lines 20-23) as of the instant claims to coatings. The compositions are to be formulated suitable to the object of use-as emulsions & flowable agents, & as powders(col. 3, lines 43-45). Pest control agents include pyrethroids-bifenthrin, pyrethrins, cyfluthrin ,permethrin, (5,7,12,13 at column 2), with adsorbent clays (column 3, lines 47-48)of bentonite. Although not specifying "beads" or "colloids", Kodama does include these components as a colloidal bead would be within the description of the Kodama bentonite clays. The use of a polymer component with a bead is not addressed.

VORIS provide barrier composition of polyurethanes and pyrethroids (example 3) including Pyrethrins (column 5, lines 40-41). Clays or carbon black are shown as used to provide increased carrier surface area to provide for advantageous high concentration of pesticide (column 6, lines 62-66)in a polymeric barrier (col. 6, lines 50-58). The instant clays were not elaborated as exfoliated forms.  
The instant bead form is described at col. 6,lines 48 through col. 7, line 34 as combination of pesticide & carrier, with both heated to melt temperatures with polymers of polyurethanes.

Voris also utilized other polymers, polyethylene, polypropylene for example (column 6, bottom; column 7 (top). The instant claims 4-17, of various polyurethane forms, are met because these forms of polyurethane are not REQUIRED as the claim 1 and 2 polymer component; Claims 4 to 17 do not state that the polymer of claim 2 is polyurethane.

Application includes spraying (fig.12) and bonding to structures as polymeric sheeting of the polymer/pesticide/carrier (column 7, lines 7-12). The product is applied to (fig. 3 and 4) to protect against termites (column 3, top). Structures are not limited (column 3) to Wood.

Appellant has shown no criticality or unexpected results attributable to treating any specific wood form or location, nor of the source of clay.

Since the Voris disclosure recites large surface area of the carbon filler, we would find the clays to also provide this surface area as shown by Kodama to be the same , bentonite, as the instant claimed clays, and therefore of the same particle size ranges, permitting incorporation of 10 % pyrethrin as of examples 2 and 3 of Voris. The instant Claim 3 antimicrobial agents or fungicides, may be incorporated (column 5, lines 44-45).

KNUDSON is cited as it teaches controlled , long term, slow release (fig. 1) of pesticide is achieved by adsorbing onto colloidal clays (column 2, lines 36-56) of smectite ,bentonite (column 3). release of pesticide is able to be obtained. Particle size is not given, however, colloidal is within the instant nanometer size. Combination with

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active is shown at examples. Since the clays are the instant, their features are also of the size & shape of the smectite & montmorillonite clays of VORIS and the instant claims.

BEALL shows the instant (col. 30, note 1, -- 44+ microns) size colloidal clays, intercalated with pesticides, & naturally or readily exfoliated (col. 5, lines 43-57, col. 8, lines 5-33). Smectite clays, (fig. 4), Montmorillonite (fig. 6) or vermiculite, illite, are shown as equivalent at col. 10, liens 32-46. The platelets (col. 4, top) are separated by 5-100 angstroms , thus they fall within colloidal size; nanoscale, as stated @ col. 24, line 40. These exfoliated platelets are used as dispersed in carriers to provide solid pesticides (col. 4, lines 50-55) of the instant pesticides (col. 21) such as pyrethroids-cypermethrin, permethrin. The advantage of the intercalated pesticide is high concentration of pesticide (col. 18, lines 59—65).

Beall shows improved exfoliated clays area [prepared by heating to increase pesticide loading (col. 13, top). Examples include (col. 29 ) Dicamba heated to 85 C & Trifluralin dried & heated @ 67 C. Example 12 a shows concomitant heating of clays & pesticide.

Insertion of Beall's, or heating of Knudson's carrier clays of pesticide would have provided higher concentration, greater efficacy, thus, longer duration of effects, if applied to Van Voris polymeric barriers, instead of the carbon black or clays Van Voris recited.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made, desiring to utilize a pestidal barrier for long term protection, to make one of KODAMA & VAN VORIS, modified to optimize protection of the desired material by utilizing a colloidal carrier, as taught by Knudson to enhance controlled release of a pesticide. Beall shows the advantages with the instant exfoliated pyrethroid intercalated clays, constituting the claimed beads. The instant claims fail to specify any particular time, temperature, or benefits of the heating now claimed, for beads of any size.

It has not clearly been established by an objective showing of some additional unusual and/or unexpected result that the preparation of the particular barrier form, delivery method or target provides any greater level of prior art criticality or expectation as claimed.

**(10) Response to argument**

As to the KODAMA citation; appellant argues KODAMA is for soil and does not have Appellants' polymer system.

As to VAN VORIS (VORIS) , Appellants' position is that many of Appellants' polymers would be unsuitable ; colloidal clay was lacking, & no application to a structure is evident to appellant.

As to KNUDSON, Appellants' fine no exfoliation & no polymer.

Appellant recites the specification showing the woods to which the instant polmeric system is applied in order to protect against termites, then fails to find exfoliated colloidal clays, beads, layering & retarded release of pest control agents in the cited art.

Appellant relies on the declaration to show superior effects of the heated instant clays, than that of the KNUDSON demonstration.

Nothing is said about BEALL.

Examiner finds that the declaration that supports the colloidal clays of KNUDSON as providing less effective results than appellants' heated, exfoliated clays is not seen as probative.

KNUDSON was cited to exemplify the colloidal clay use to incorporate pesticides to underscore the KODAMA & VORIS use of carriers. KNUDSON is not presented as the determinant exemplification of termite barriers, but rather as an exemplification of the advantageous use of colloidal clays as pesticide carriers.

KODAMA provides termite barriers to houses & other structures, not only to soil. VORIS provides the same polymers appellants claim, heated, molten, to form beads (see col. 6,lines 48-col. 7, lines 34). Although clays are not specified as to what clays , the use of bentonite as shown by KODAMA, KNUDSON & BEALL would be an obvious improvement over the VORIS generic clay or carbon, as greater surface area , slower release & longer duration of effects would result. See figures, for application to structures, such as 14, pellets applied to a board.

The application of the combination of the polymeric inclusion of exfoliated pesticide as described by BEALL to structures subject to termite damage, as discussed by KODAMA, would constitute an improvement in long term termite protection. The polymers are compatible with KODAMA'S termicides , & would be obvious to the pesticide applicator desirous of protecting structures from termite protection to provide.

Beall provides advantages to heating of the instant clays & pesticides, & it would be evident to the formulator to prepare barriers using the heated materials as does VORIS, in order to increase the loading & ultimately the lifetime of a useful barrier. The instant claims fail to specify any particular time, temperature, or benefits of the heating claimed, for beads of any size.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/NEIL LEVY/

Primary Examiner, Art Unit 1615

CONFEREES:

/Johann R. Richter/

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/DAVE NGUYEN/

tQAS